

Remarks/Arguments

On page two of the Office Action, the Examiner rejected claims 1-11 and 13-21 under 35 U.S.C. 112 as failing to comply with the written description requirement. In doing so, the Examiner stated that the written description supports having "a wound electrode wound around two (2) contact pins...," but does not support being wound around only one contact pin. Applicant respectfully traverses these rejections for the reasons discussed below.

Applicant believes the claims 1-11 and 13-21 comply with the written description requirement. The Applicant respectfully points out paragraph one (see P0001) which states "at least one wound electrode element and at least one pin," whereby a reasonable inference for one of ordinary skill in the art would be that the wound electrode element is wound around said at least one pin, which means one or more pins.

Furthermore, the Applicant respectfully directs the Examiner's attention to paragraph seven (see P0007) which specifically describes the invention in the singular stating, "the electrode element is wound around the pin...." Paragraphs seven (7) through eleven (11) further describe the invention in the singular. Paragraph twelve (see P0012) expresses that which is represented in P0038/Figure 4, the preferable design consisting of two pins.

Accordingly, for the reasons discussed herein, Applicant believes that language in claim 1 is completely contained and supported within the written description and believes the independent claim 1 is not unpatentable under 35 U.S.C. 112.

On page three of the Office Action, the Examiner rejected claims 17-20 under 35 U.S.C. 112 as being indefinite because they depended from cancelled claim 16. Applicant has cancelled claims 17-20.

On page four, in paragraphs 6-7 of the Office Action, the Examiner rejected (at least) claims 1 and 21 under 35 U.S.C. 102(b) as being anticipated by EP 1100138 ("EP

'138"). The Examiner stated various reasons for the rejection. For the reasons discussed below, Applicant believes the claims are not anticipated by EP '138 and respectfully traverses this rejection..

In paragraph seven of the Office Action, Examiner states that EP '138 comprises a housing (3, 4, 5 of Fig. 1) and pins (13, 14 of Figure 1; 32, 33 of Fig. 5a). As understood, the Examiner interprets the pipes (7, 8 of Fig. 1; 34, 35 of Fig. 5a) as being pins as well. From this point of view, the Examiner interprets the shown pipes (34, 35 in Fig. 5a) as the claimed pins, while the disclosed pins (13, 14 of Fig. 1 or 32, 33 of Fig. 5a) are taken to represent the second connection which can be tightened mechanically.

Applicant respectfully believes that this interpretation is inconsistent with the actual construction of the battery in EP '138. With respect to Fig. 1 of EP '138, the pins that the Examiner believes represents the second connection are believed to be square pins that are soldered to the circuit board. Applicant notes that the German text of EP '138 reads "In der Schaltungsplatine 2 sind zwei Vierkantstifte 13, 14 eingelötet" which translates to "two square pins, 13, 14 are soldered to the circuit board 2." (Col. 6, l. 16-17).

With respect to Fig. 5, the German text of EP '138 reads "Die Batterie 30 is wiederum auf einer Schaltungsplatine 31 aufgesteckt, welche zwei Vierkantstifte 32, 33 aufweist." (Col. 7, l. 7-9). This is to be translated as: "The battery 30 is plugged onto a circuit board 31, which features two square pins 32, 33." Thus, the pins 13, 14 of EP '138 do not appear to be part of the battery, but solely connection elements soldered to the circuit board.

Moreover, Applicant respectfully points out that reference numeral 12 of Fig. 1 of EP '138 is a tubular rivet and is therefore unable to be mechanically tightened as well.

In contrast, Applicant's claims, such as claim 1, each require that the second connection can be mechanically tightened. Accordingly, Applicant believes that independent claim 1 is not anticipated by EP '138 and should be allowed.

Claim 21 depends directly from claim 1. For the reasons discussed earlier relative to the rejection of claim 1, it is respectfully submitted that this claim is also in condition for allowance and such allowance is respectfully requested.

In paragraph 10 on page 7 of the Office Action, the Examiner rejected claims 1-11, 13-15 and 17-20 under 35 USC 103(a) as being unpatentable over Souliac et al. US 6,399,237, in view of Applicant's Admitted Prior Art (hereinafter referred to as "AAPA"). In paragraph 11 on page 11 of the Office Action, the Examiner rejected claim 21 under 35 USC 103(a) as being unpatentable over Souliac et al. in view of the AAPA and further in view of EP 1100138. The examiner cited various reasons for the rejections. For the reasons discussed below, Applicant respectfully traverses the rejections.

Souliac et al. teaches a cylindrical high-capacity (i.e., greater than 10 Ah) sealed storage cell having a terminal at one end which is made of aluminum, wherein: the one end includes an aluminum cover adapted to be brought into contact with an external electrical connecting part by a clamping structure which is at least in part under cover and co-operates with an external assembly mechanism.

The Examiner states that Souliac et al. discloses a cylindrical high capacity sealed storage cell. The Examiner further mentions that Souliac et al. illustrates a battery cell 1 comprising at least one alternation of positive electrodes, negative electrode and separator wound in a spiral form. (Col. 3, l. 58-62).

Souliac et al. states that "the electrochemical stack 9...is generally wound in a spiral about an X axis on a central support 19." (Col. 3, l. 59-62). Furthermore, the support 19 is either made from an insulative material, or if not insulative itself, then is insulated from the electrodes by an insulative material of the same type as the separator. (Col. 3, l. 63-67). Thus, Souliac et al. appears to teach of a battery with an electrode element which is wound around an insulated supporting element. This is contrary to Applicant's claimed battery.

In Applicant's claim 1, the claim recites:

"at least one wound electrode element, the electrode of which being supported on a metallic supporting strip, and having inside said housing at least one pin for making contact with said at least one wound electrode element, and having at least one first contact connection which is fitted to an outer face of the housing and is electrically connected to said at least one pin which is arranged in the housing, whereas a second connection which can be tightened mechanically is formed between said at least one first contact connection and said at least one pin, whereas said at least one wound electrode element is wound directly around and directly supported by said at least one pin and said metallic supporting strip of said at least one wound electrode element is welded directly to said at least one pin" (emphasis added).

Applicant can find no teaching in Souliac et al. that suggests that the electrode be wound around a pin. Even assuming arguendo, that the Souliac et al. insulator is a pin, which Applicant believes it is not, the insulator is not conductive and, therefore, cannot teach of or even perform the same function as the Applicant's conductive pin as recited in claim 1.

In paragraph 10 of the Office Action, the Examiner states that the electrodes of Souliac et al.'s invention are indirectly connected to connecting part 29 via blades 24 (See Fig. 1 of Souliac et al.). The Examiner concludes that connection part 29, serving as the Applicant's pin as interpreted by the Examiner, indirectly provides mechanical support to the wound electrode assembly.

Applicant respectfully points out the language of claim 1 that requires, "wound electrode element is wound around and supported by said at least one pin and...welded directly to said at least one pin." Thus, not only is the electrode element specifically required to be wound around the pin, but claim 1 requires that it be directly welded to the pin. One advantage of a direct weld is that it provides direct mechanical support and electrical connection, which is not provided in Souliac et al.

Thus, not only does Souliac et al., AAPA, and their combination fail to teach of all the elements of Applicant's claim 1, they teach away from the elements. Even if it were obvious to combine the references as the Examiner suggests, it seems that the

resultant combination leads to an electrode welded to an insulator (if that is possible), which in turn leads to no electrical connection. The result is believed to be an inoperable battery.

Even assuming arguendo, that Souliac et al. connecting part 29 is a pin, which Applicant believes it is not, the reference still fails to teach of an electrode wound around a pin. Notice that Souliac et al. mentions that the electrode is generally wound in a spiral about an X axis on a central insulated support 19. (Col. 3, lines 60-62). Thus, Souliac et al.'s electrode is being wound around central insulated support 19 as shown in Souliac et al.'s Fig. 1.

In contrast, Applicant respectfully submits that Souliac et al. fails to teach of an electrode element that is both wound around the pin and welded thereto.

As understood, Applicant believes Souliac et al. describes a battery with an electrode element which is wound around an insulated supporting element 19, which appears to be contrary to the battery claimed in Applicant's claims, which require an electrically conductive pin used as said supporting element. Because of the insulating support element in Souliac et al., it seems to be very unlikely that the electrode element of the battery described by Souliac et al. can be supported by the described blades as argued by the Examiner. As mentioned earlier, notice the electrode element is not welded directly to the contacting element 29, which has been interpreted by the Examiner as being the claimed pin.

Notwithstanding the foregoing, Applicant has amended its independent claim 1 to recite that the electrode element is wound directly around and directly supported by the at least one pin. Souliac et al., whether taken alone or in combination, fails to teach of these limitations.

For all the foregoing reasons, Applicant believes that claim 1 is not obvious in view of the cited references and therefore is patentable over the cited references when viewed alone or in combination. Applicant has cancelled claims 17 – 20.

Claims 2 – 11, 13 – 15 and 21 are dependent claims and depend either directly or indirectly from claim 1. For the reasons discussed earlier relative to the rejection of claim 1, it is respectfully submitted that these claims are also in condition for allowance and such allowance is respectfully requested.

Regarding the Examiner's arguments related to the capacity of Souliac et al. battery, the Examiner asserts that Souliac et al. teaches of a capacity of 1 Ah and cites various reasons for such assertion. The Applicant respectfully traverses those statements for the following reasons.

Applicant respectfully points out that the capacity of a battery indeed is a characteristic parameter of it, meaning that the capacity is the maximum amount of charge which can be provided by the battery. Souliac et al. clearly states that its claimed battery is greater than 10 Ah. (Col. 1, l. 5.; Col. 2, l. 7; Col. 8, l. 52.)

Moreover, Applicant respectfully submits that it believes if one were to operate the Souliac reference at 1 Ah or less, it would not function as intended by Souliac et al., which clearly requires a capacity of 10 Ah or more. Thus, the Examiner seems to be destroying the teaching of Souliac et al. by interpreting the reference as suggested.

Notwithstanding, Applicant has amended claim 1 to recite that: "wherein a maximum amount of charge that said battery can hold is less than 1 Ah," to further focus this feature of the claim.

In view of the reasons discussed herein and further in view of claim 1 as now presented, Applicant believes the independent claim 1 is not unpatentable over the cited references.

As mentioned earlier, Claims 2 - 11, 13 - 15 and claim 21 are dependent claims and depend either directly or indirectly from claim 1. For the reasons discussed earlier relative to the rejection of claim 1, it is respectfully submitted that these claims are also in condition for allowance and such allowance is respectfully requested.

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Group: 1745


FOR ALL THE FOREGOING REASONS, APPLICANT BELIEVES THIS CASE IS NOW IN CONDITION FOR ALLOWANCE. IF THE EXAMINER FEELS THAT THIS AMENDMENT DOES NOT PLACE THE CASE IN CONDITION FOR ALLOWANCE, THEN APPLICANT RESPECTFULLY REQUESTS AN INTERVIEW WITH THE EXAMINER.

The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1287. Applicant hereby provides a general request for any extension of time which may be required at any time during the prosecution of the application. The Commissioner is also authorized to charge any fees which have not been previously paid for by check and which are required during the prosecution of this application to Deposit Account No. 50-1287. (Should Deposit Account No. 50-1287 be deficient, please charge any further deficiencies to Deposit Account No. 10-0220).

Applicant invites the Examiner to contact the undersigned via telephone with any questions or comments regarding this case.

Reconsideration and favorable action are respectfully requested.

Respectfully submitted,
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